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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,406	07/18/2003	HanCheng Hsiung	5760-12400	5015

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MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

EXAMINER

LU, CHARLES EDWARD

ART UNIT	PAPER NUMBER
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2161

MAIL DATE	DELIVERY MODE
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02/28/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/623,406

Applicant(s)

HSIUNG ET AL.

Examiner

CHARLES E. LU

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This Action is in response to the Amendment dated 12/14/2007. Claims 1-20 are pending and rejected.

***Response to Amendments/Response to Arguments***

2. Applicant's arguments have been fully considered. It is noted that the arguments are drawn to the claims as amended. However, the claims as amended contain subject matter that does not appear to be supported in the specification, and the claims as amended contain relative terminology, and thus, new 35 USC 112, first and second paragraph rejections are necessitated (see below). Furthermore, the claim amendments, read in its broadest reasonable interpretation, does not overcome the prior art rejection. See the analysis of the "new data" limitation in the prior art rejection below. The motivation to combine is proper because motivation can come from the knowledge generally available to one of ordinary skill in the art, See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and one would have used Raman to provide access to file system data and availability during loads (see below) with the motivation of increasing the flexibility of Kampe by allowing Kampe to operate with file system data and to have availability during loads. See the rejection below.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**3. Due to amendment, claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.**

As to claim 1 and the other independent claims, the specification does not support "wherein the new data is new with respect to the production database." The specification generally mentions loading "new" data in several places (e.g., fig. 2, para. 0034) but does not describe that the "new data is new with respect to the production database."

The dependent claims are rejected because they inherit the deficiencies of the independent claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**4. Due to amendment, claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**As to claim 1** and the other independent claims, the term "new" is a relative term which renders the claim indefinite. "New" is not defined by the claim, and the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Furthermore, the intended meaning of "new" is unclear.

The dependent claims are rejected because they inherit the deficiencies of the independent claims.

The broadest reasonable interpretation has been applied to the claims.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**5. Claims 1-2, 5-10, 13-16, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kampe et al (US 2002/0032883), hereafter "Kampe," in view of Raman et al (US 2003/0217119), hereafter "Raman."**

**As to claim 1**, Kampe teaches the following claimed subject matter:

A system comprising one or more hosts (fig. 2) configured to implement production system (primary component 205), and

A refresh mechanism (software) configured to:

Generate a storage checkpoint of data of the production system (502);

Generate a data clone, wherein data of the data clone comprises data from the storage checkpoint (502-505);

Load new data to the data clone wherein the load updates the storage checkpoint (504);

After the load, switch from previous data of the production system to the storage checkpoint to be the data for the production system (521, 522, para. 0064, the switch happens after data has been loaded to the checkpoint/replica).

Kampe does not expressly teach a production "database," wherein the data is "file system data," and wherein the production database is available for access by users during the load.

However, Raman teaches a production database (primary data storage system), wherein the data is file system data (para. 0053), and wherein the production database is available for access by users during the load (from para. 0050).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kampe, such that it implements a production database with file system data, and wherein the database is available for access by users during the load. The motivation would have been to improve accessibility for file system data, as known to one of ordinary skill in the art and taught by Raman (para. 0049).

Kampe as applied above further teaches "wherein the new data is new with respect to the production database" for at least the following reasons:

Kampe meets the claim limitation when interpreting "new" as "different." In addition to updating the checkpoint/"clone" to maintain a current state of the primary component, Kampe teaches that checkpoints have specific characteristics including

format, states, control blocks, and attributes (para. 0078). These data characteristics must be "loaded" as claimed in order to manage the checkpoint/"clone" itself. For example, updating checkpoint state data (para. 0046 – 0054, 0080) manages the current operational state of the checkpoint. Furthermore, control block write operations (para. 0085) also meet the "loading new data" limitation for similar reasons. Information regarding checkpoint attributes is found at least at para. 0086. Note that the various checkpoint properties mentioned here are not data previously existing in the primary component. Thus, they are considered "new" data.

Kampe also meets the claim limitation when interpreting "new" as "current," "recent" or "fresh." In fig. 4a, for example, Kampe teaches creating/initializing a replica and "continuously updating a checkpoint." The continuously updated data thus recently comes into existence during creation/update in steps 503-505, whereas the data in the primary component has already existed. The updated data is thus "new" data with respect to the primary component because the updated data is current, recent, and "fresh" data compared to the primary data.

**As to claim 2**, Kampe as applied above teaches performing post-processing on the clone prior to the switching (502-505).

**As to claim 5**, Kampe as applied above uses a "checkpoint service" and "replica," which must include references to data in the production database or else the data could not be restored to the primary component (see above and para. 0065).

**As to claim 6**, Kampe as applied above teaches loading new data to the database clone on a host machine hosting the production database (201, note arrow going from 205 to 211, also see fig. 4A).

Kampe does not expressly teach the above loading “to the database clone” to a different host machine.

However, Raman teaches loading data to a different host machine (fig. 1). Kampe also teaches loading data to a different host machine (fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Kampe and Raman, such that the loading new data to the database clone would occur on a different machine. The motivation would have been to allow a system designer to implement the system if the cloning needs to happen on a different machine. This might occur if there were cost, space, processing, or location constraints.

**As to claim 7**, Kampe as applied above teaches performing the loading of new data to the database clone on a host machine hosting the production database (fig. 2, 201, see “node1,” also see above).

**Claims 8-10, 13-16, and 19-20** are rejected on the same basis as claims 1-2 and 5-7 above.

**6. Claims 3, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kampe, in view of Raman, further in view of Ishihara et al (U.S. Patent 6,636,876), hereafter “Ishihara.”**



**As to claim 3**, Kampe and Raman do not expressly teach stopping the production database prior to the switch and starting the production database after the switch.

However, Kampe may stop the production database before switching, and restarting the production database after switching (para. 0065), because the primary is "restarted" using the "switched" checkpointed data. The production database in this case is the same production database. Ishihara teaches the actual steps of stopping a production database prior to a switch, and restarting a production database after the switch (col. 6, ll. 27-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kampe and Raman, such that "stopping the production database prior to the switch and starting the production database after the switch" is implemented. The motivation would have been to facilitate gracefully switching from one data system to another, as known to one of ordinary skill in the art.

**Claims 11 and 17** are rejected on the same basis as claim 3 above.

**7. Claims 4, 12, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kampe, in view of Raman, further in view of Applicant Admitted Prior Art, hereafter "AAPA."**

**As to claim 4**, Kampe and Raman teach a "production database," as discussed above, but do not expressly teach wherein the production database is a data warehouse.

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However, AAPA teaches that a data warehouse is a database and may be a consolidation of other databases (p. 1, ll. 13-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kampe and Raman, such that the production database is a data warehouse. The motivation would have been to facilitate business decisions, as taught by AAPA (p. 1, ll. 14-19).

**Claims 12 and 18** are rejected on the same basis as claim 4, discussed above.

***Conclusion***

8. Applicant's arguments were fully considered but were not persuasive.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

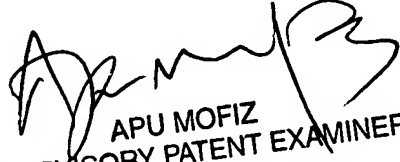
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Lu whose telephone number is (571) 272-8594. The examiner can normally be reached on 8:30 - 5:00; M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached at (571) 272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Charles E Lu/  
Examiner, Art Unit 2161  
2/21/2008

  
APU MOFIZ  
SUPERVISORY PATENT EXAMINER